

REMARKS

Claims 1-3 are pending in this application. By this Amendment, claim 1 is amended. The amendments to claim 1 introduce no new matter as they are supported at least by the depiction in Fig. 1 and the description at paragraphs [0040] - [0045] of Applicant's specification as originally filed. Reconsideration based on the above amendments and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

The Office Action, in paragraph 3, rejects claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,877,738 to Ito et al. (hereinafter "Ito"), and further in view of U.S. Patent No. 4,465,999 to Tsuzuki et al. (hereinafter "Tsuzuki"). This rejection is respectfully traversed.

Ito teaches a multiplex driving method and driving apparatus for a liquid crystal display device that provides a weighted voltage applied in accordance with desired display data in each of a plurality of intervals to achieve a gray scale display (Abstract). Figs. 7A-7C of Ito display multiple voltage levels, i.e., more than three predetermined voltages, usable to produce the gray scale gradations required of the method and apparatus disclosed. There is, for example, no specified relationship between V_{X1} (and $-V_{X1}$), V_{Y1} (and $-V_{Y1}$) and V_{Y2} (and

V_{Y2}), except where Ito states that it is "preferable that the relationship between each of the voltage levels is $2 \cdot V_{Y1} = V_{Y2}$ " (col. 19, lines 25-48).

Ito further teaches, in Figs. 9A-9C employing a pulse width modulation technique for achieving a gray scale display (col. 20, lines 56-58). Ito contemplates voltage values of 0, V_{X1} , $-V_{X1}$, V_{Y1} , V_{Y2} , $-V_{Y1}$, $-V_{Y2}$, and various combinations of additions and subtractions of these respective values, specifically in Fig. 9C. Ito does not disclose that any three of these voltages are applicable for both scanning signals and data signals.

Tsuzuki teaches a method of cyclically driving an electro-optical display device having a matrix array of a plurality of row electrodes and a plurality of column electrodes (Abstract). Specifically, Tsuzuki discusses states in which individual display elements are turned on and/or turned off (see e.g., col. 11, lines 15-18).

Claim 1 recites, among other features, a liquid crystal display elements driving method, comprising: displaying gray shades with a plurality of liquid crystal display element ... simultaneously applying scanning signals of one of three predetermined voltages to three scanning electrodes applying a data signal of one of the three predetermined voltages to each of the prescribed number of signal electrodes. Predetermined voltages to each of the prescribed number of signal electrodes, the one of the three predetermined voltages being determined according to display data that prescribe gray shades to be displayed, wherein a display frame is divided into four periods, and a signal polarity applied to one of the three scanning electrodes during three of the four periods is opposite to a signal plurality applied to the others of the three scanning electrodes during the three periods, and a signal polarity applied to all of the three scanning electrodes during the fourth of the four periods is the same.

Applicant respectfully submits that the combination of Ito and Tsuzuki cannot reasonably be read to have suggested all of the features recited in independent claim 1.

Specifically, Tsuzuki is not directed to a method for displaying gray shades in a liquid crystal display device. Additionally, neither of the applied references discusses a display frame divided into four periods with the combination of signal polarities specifically recited in independent claim 1. Finally, Applicant respectfully submits that inappropriate hindsight has been applied in light of Applicant's disclosure in combining the applied references in order to attempt to find all of the features recited in independent claim 1 to have been suggested.

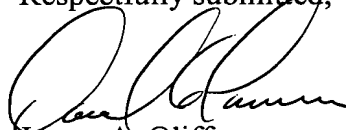
In view of the foregoing, Applicant respectfully submits that the combination of the applied references does not teach, nor would the combination have suggested, all of the features recited in independent claim 1. Further, for the reasons discussed the combination of Ito and Tsuzuki does not suggest the features of dependent claims 2 and 3, which although containing separately patentable subject matter, incorporate all of the features of independent claim 1 from which they depend and are allowable for at least their dependence on claim 1.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over the combination of the applied references are respectfully requested.

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-3 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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